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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,484	07/09/2001	Daniel Cohen	GEN-T11XC3D2	6608

23557 7590 07/15/2005

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EXAMINER

FREDMAN, JEFFREY NORMAN

ART UNIT PAPER NUMBER

1637

DATE MAILED: 07/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/901,484

Applicant(s)

COHEN ET AL.

Examiner

Jeffrey Fredman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 50-53, 56-60, 63, 64, 67, 68 and 71-84 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 50-53, 56-59, 63, 64, 67, 68, 71, 72 and 74-84 is/are rejected.
- 7) ☒ Claim(s) 60 and 73 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Priority

1. The current application claims priority to a series of cases dating back to 1997. However, the claims are not given priority to applications 08/996,306 and 60/099,658 because in the current application SEQ ID NO: 179 is 56,520 nucleotides while in those parent applications, the largest sequences were 56,516 nucleotides. Consequently, there is no possibility that these applications provide full descriptive support for SEQ ID NO: 179, and priority to these applications is denied. Therefore, for purposes of prior art, the priority date of this application is limited to 09/218,207, filed December 22, 1998, which provides the full 56,520 nucleotides of SEQ ID NO: 179.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The rejection of claims 50, 59 and 61-66 under 35 U.S.C. 102(b) as being anticipated by Weier et al (Hum. Genet. (1991) 87:489-494) as evidenced by Genbank Accession No. AC100813 (March 2003) is withdrawn in view of the amendment..

4. Claims 50-52, 56-59, 63, 64, 67, 68, 71-72 and 74-84 are rejected under 35 U.S.C. 102(a) and (b) as being anticipated by Osoegawa et al (Genomics (1998)52:1-8)

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as evidenced by Genbank Accession No. AC009631 and an email from Pieter de Jong (attached).

Osoegawa teaches synthesis of BAC chromosome libraries (abstract). In particular, Osoegawa teaches the synthesis of a particular BAC library termed RPCI-11 (also called RP11) which was grown in bacterial host cells using recombinant vectors which were placed onto filters and the nucleic acid was isolated (page 2 and page 3, column 1).

A specific isolated BAC, RP11-372K15 which is in a composition of this library and which is at a specific location on the arrays sold by the BACPAC consortium, comprises 2010 contiguous nucleotides from nucleotides that overlap position 51333, 51435, 51468, 51515, 51557, 51566, 51632, 51666, 52016, 52096, 52151, 52282, 52348, 5241, 52580, 5271, 52772, 52860 and 53092 of SEQ ID NO: 179. As shown by the alignment below, this BAC has close match with the reference sequence.

Score = 3828 bits (1931), Expect = 0.0
Identities = 2009/2010 (99%), Gaps = 0/2010 (0%)
Strand=Plus/Plus

SEQ ID NO: 179 51233
AATATCAAAAGAGTCGGTGTGAACCTTGGTTGGACCCCAAGTTCACAAGATTTTAAAGGT 51292

|||||
AC009631 446
AATATCAAAAGAGTCGGTGTGAACCTTGGTTGGACCCCAAGTTCACAAGATTTTAAAGGT 505

SEQ ID NO: 179 51293
GATGAGAGCCTGCAGACATTCTGCCTAGATTTACTAGCGTGTGCCTTTTGCCTGCTTCTC 51352

|||||
AC009631 506
GATGAGAGCCTGCAGACATTCTGCCTAGATTTACTAGCGTGTGCCTTTTGCCTGCTTCTC 565

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SEQ ID NO: 179 51353

TTTGATTTTCACAGAAATATTCATTTCAGAAGTCGCGTTTCTGTAGTGTGGTGGATTCCCACT 51412

|||||

AC009631 566

TTTGATTTTCACAGAAATATTCATTTCAGAAGTCGCGTTTCTGTAGTGTGGTGGATTCCCACT 625

SEQ ID NO: 179 51413

GGGCTCTGGTCCTTCCCTTGGATCCCGTCAGTGGTGCTGCTCAGCGGCTTGACGCTAGAC 51472

|||||

AC009631 626

GGGCTCTGGTCCTTCCCTTGGATCCCGTCAGTGGTGCTGCTCAGCGGCTTGACGCTAGAC 685

SEQ ID NO: 179 51473

TTGCTAGGAAGAAATGCAGAGCCAGCCTGTGCTGCCCCACTTTCAGAGTTGAACTCTTTAA 51532

|||||

AC009631 686

TTGCTAGGAAGAAATGCAGAGCCAGCCTGTGCTGCCCCACTTTCAGAGTTGAACTCTTTAA 745

SEQ ID NO: 179 51533

GCCCTTGTGAGTGGGCTTACCAGCTACTGCAGAGGCATTTTGCATTTGTCTGTGTCAAG 51592

|||||

AC009631 746

GCCCTTGTGAGTGGGCTTACCAGCTACTGCAGAGGCATTTTGCATTTGTCTGTGTCAAG 805

SEQ ID NO: 179 51593

AAGTTCACCTTCTCAAGCCAGTGAAATACAGACTTAATTCGTCATGACTGAACGAATTTG 51652

|||||

AC009631 806

AAGTTCACCTTCTCAAGCCAGTGAAATACAGACTTAATTCGTCATGACTGAACGAATTTG 865

SEQ ID NO: 179 51653

TTTATTTCCCATTAGGTTTAGTGGAGCTACACATTAATATGTATCGCCTTAGAGCAAGAG 51712

|||||

AC009631 866

TTTATTTCCCATTAGGTTTAGTGGAGCTACACATTAATATGTATCGCCTTAGAGCAAGAG 925

SEQ ID NO: 179 51713

CTGTGTTCCAGGAACCAGATCACGATTTTGTAGCCATGGAACAATATATCCCATGGGAGAA 51772

|||||

AC009631 926

CTGTGTTCCAGGAACCAGATCACGATTTTGTAGCCATGGAACAATATATCCCATGGGAGAA 985

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SEQ ID NO: 179 51773

GACCTTTCAGTGTGAACTGTTCTATTTTTGTGTTATAATTTAAACTTCGATTTTCCTCATA 51832

|||||

AC009631 986

GACCTTTCAGTGTGAACTGTTCTATTTTTGTGTTATAATTTAAACTTCGATTTTCCTCATA 1045

SEQ ID NO: 179 51833

GTCCTTTAAGTTGACATTTCTGCTTACTGCTACTGGATTTTTGCTGCAGAAATATATCAG 51892

|||||

AC009631 1046

GTCCTTTAAGTTGACATTTCTGCTTACTGCTACTGGATTTTTGCTGCAGAAATATATCAG 1105

SEQ ID NO: 179 51893

TGGCCACATTAAACATACCAGTTGGATCATGATAAGCAAAATGAAAGAAATAATGATTA 51952

|||||

AC009631 1106

TGGCCACATTAAACATACCAGTTGGATCATGATAAGCAAAATGAAAGAAATAATGATTA 1165

SEQ ID NO: 179 51953

AGGGAAAATTAAGTGACTGTGTTACACTGCTTCTCCCATGCCAGAGAATAAACTCTTTCA 52012

|||||

AC009631 1166

AGGGAAAATTAAGTGACTGTGTTACACTGCTTCTCCCATGCCAGAGAATAAACTCTTTCA 1225

SEQ ID NO: 179 52013

AGCATCATCTTTGAAGAGTCGTGTGGTGTGAATTGGTTTGTGTACATTAGAATGTATGCA 52072

|||||

AC009631 1226

AGCGTCATCTTTGAAGAGTCGTGTGGTGTGAATTGGTTTGTGTACATTAGAATGTATGCA 1285

SEQ ID NO: 179 52073

CACATCCATGGACACTCAGGATATAGTTGGCCTAATAATCGGGGCATGGGTAAAACCTTAT 52132

|||||

AC009631 1286

CACATCCATGGACACTCAGGATATAGTTGGCCTAATAATCGGGGCATGGGTAAAACCTTAT 1345

SEQ ID NO: 179 52133

GAAAATTTCTCATGCTGAATTGTAATTTTCTCTTACCTGTAAAGTAAAATTTAGATCAA 52192

|||||

AC009631 1346

GAAAATTTCTCATGCTGAATTGTAATTTTCTCTTACCTGTAAAGTAAAATTTAGATCAA 1405

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SEQ ID NO: 179 52193

TTCCATGTCCTTTGTTAAGTACAGGGATTTAATATATTTTGAATATAATGGGTATGTTCTA 52252

|||||

AC009631 1406

TTCCATGTCCTTTGTTAAGTACAGGGATTTAATATATTTTGAATATAATGGGTATGTTCTA 1465

SEQ ID NO: 179 52253

AATTTGAACTTTGAGAGGCAATACTGTTGGAATTATGTGGATTCTAACTCATTTTAACAA 52312

|||||

AC009631 1466

AATTTGAACTTTGAGAGGCAATACTGTTGGAATTATGTGGATTCTAACTCATTTTAACAA 1525

SEQ ID NO: 179 52313

GGTAGCCTGACCTGCATAAGATCACTTGAATGTTAGGTTTCATAGAACTATACTAATCTT 52372

|||||

AC009631 1526

GGTAGCCTGACCTGCATAAGATCACTTGAATGTTAGGTTTCATAGAACTATACTAATCTT 1585

SEQ ID NO: 179 52373

CTCACAAAAGGTCTATAAAATACAGTCGTTGAAAAAATTTTGTATCAAAATGTTTGAA 52432

|||||

AC009631 1586

CTCACAAAAGGTCTATAAAATACAGTCGTTGAAAAAATTTTGTATCAAAATGTTTGAA 1645

SEQ ID NO: 179 52433

AATTAGAAGCTTCTCCTTAACCTGTATTGATACTGACTTGAATTATTTTCTAAAATTAAG 52492

|||||

AC009631 1646

AATTAGAAGCTTCTCCTTAACCTGTATTGATACTGACTTGAATTATTTTCTAAAATTAAG 1705

SEQ ID NO: 179 52493

AGCCGTATACCTACCTGTAAGTCTTTTCACATATCATTTAACTTTTGTGTTGATTATTA 52552

|||||

AC009631 1706

AGCCGTATACCTACCTGTAAGTCTTTTCACATATCATTTAACTTTTGTGTTGATTATTA 1765°

SEQ ID NO: 179 52553

CTGATTTACAGCTTAGTTATTAATTTTCTTTATAAGAATGCCGTCGATGTGCATGCTTT 52612

|||||

AC009631 1766

CTGATTTACAGCTTAGTTATTAATTTTCTTTATAAGAATGCCGTCGATGTGCATGCTTT 1825

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SEQ ID NO: 179 52613

TATGTTTTTTCAGAAAAGGGTGTGTTTGGATGAAAGTAAAAAAAAAATAAAATCTTTCAC 52672

|||||
AC009631 1826

TATGTTTTTTCAGAAAAGGGTGTGTTTGGATGAAAGTAAAAAAAAAATAAAATCTTTCAC 1885

SEQ ID NO: 179 52673

TGTCTCTAATGGCTGTGCTGTTTAACATTTTTTGACCCTAAAATTACCAACAGTCTCCC 52732

|||||
AC009631 1886

TGTCTCTAATGGCTGTGCTGTTTAACATTTTTTGACCCTAAAATTACCAACAGTCTCCC 1945

SEQ ID NO: 179 52733

AGTACATAAAATAGGCTTAATGACTGGCCCTGCATTCTTCACAATATTTTTCCCTAAGCT 52792

|||||
AC009631 1946

AGTACATAAAATAGGCTTAATGACTGGCCCTGCATTCTTCACAATATTTTTCCCTAAGCT 2005

SEQ ID NO: 179 52793

TTGAGCAAAGTTTTAAAAAATACACTAAAATAATCAAACTGTTAAGCAGTATATTAGT 52852

|||||
AC009631 2006

TTGAGCAAAGTTTTAAAAAATACACTAAAATAATCAAACTGTTAAGCAGTATATTAGT 2065

SEQ ID NO: 179 52853

TTGGTTATATAAATTCATCTGCAATTTATAAGATGCATGGCCGATGTTAATTTGCTTGGC 52912

|||||
AC009631 2066

TTGGTTATATAAATTCATCTGCAATTTATAAGATGCATGGCCGATGTTAATTTGCTTGGC 2125

SEQ ID NO: 179 52913

AATTCGTGAATCATTAAGTGATCTCAGTGAAACATGTCAAATGCCTTAAATTAAC TAAGT 52972

|||||
AC009631 2126

AATTCGTGAATCATTAAGTGATCTCAGTGAAACATGTCAAATGCCTTAAATTAAC TAAGT 2185

SEQ ID NO: 179 52973

TGGTGAATAAAAGTGCCGATCTGGCTAACTCTTACACCATACTACTGATAGTTTTTCAT 53032

|||||
AC009631 2186

TGGTGAATAAAAGTGCCGATCTGGCTAACTCTTACACCATACTACTGATAGTTTTTCAT 2245

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SEQ ID NO: 179 53033
ATGTTTCATTTCCATGTGATTTTTTAAAAATTTAGAGTGGCAACAATTTTGCTTAATATGGG 53092

|||||
AC009631 2246
ATGTTTCATTTCCATGTGATTTTTTAAAAATTTAGAGTGGCAACAATTTTGCTTAATATGGG 2305

SEQ ID NO: 179 53093
TTACATAAGCTTTATTTTTTCCCTTTGTTTCATAATTATATTCTTTGAATAGGTCTGTGTCA 53152

|||||
AC009631 2306
TTACATAAGCTTTATTTTTTCCCTTTGTTTCATAATTATATTCTTTGAATAGGTCTGTGTCA 2365

SEQ ID NO: 179 53153
ATCAAGTGATCTAACTAGACTGATCATAGATAGAAGGAAATAAGGCCAAGTTCAAGACCA 53212

|||||
AC009631 2366
ATCAAGTGATCTAACTAGACTGATCATAGATAGAAGGAAATAAGGCCAAGTTCAAGACCA 2425

SEQ ID NO: 179 53213 GCCTGGGCAACATATCGAGAACCTGTCTAC 53242
|||||
AC009631 2426 GCCTGGGCAACATATCGAGAACCTGTCTAC 2455

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The above alignment, meets several of the elements of claim 50. The sequence meets element (a) because there are more than 1000 consecutive nucleotides of SEQ ID NO: 179, specifically nucleotides 52017 to 53242 which comprise 1225 consecutive nucleotides of SEQ ID NO: 179. This sequence also comprises the complement claimed in (d) and meets (e) for all of positions 51333, 51435, 51468, 51515, 51557, 51566, 51632, 51666, 52016, 52096, 52151, 52282, 52348, 5241, 52580, 5271, 52772, 52860 and 53092 of SEQ ID NO: 179, where the central T is position 32703 of SEQ ID NO: 179, where N is one of these listed positions and X is within the range of 8-30, including 8, 10, 12, 15, 20 or 25.

The email of Pieter de Jong indicates that filters from the RPCI-11 library were first publicly available, used and sold on August 1, 1997.

With regard to claim 51, Osoegawa teaches that the sequences were in Bac vectors (see page 1, column 2, subheading "BAC/PAC vector preparation").

With regard to claim 52, Osoegawa teaches that the vectors were in bacterial host cells (see page 2, column 1).

With regard to claim 56, Osoegawa teaches that the sequences were in vectors, and the vector sequence can function as a label for the detection of the target sequence (see page 1, column 2. To explain, a DNA sequence may itself be a label, and frequently is used as such, since specific DNA can be detected by hybridization).

With regard to claims 57-58, Osoegawa teaches that the oligonucleotide is attached, indirectly, to a solid support (see page 2, column 1 and email, where filters were sold).

With regard to claims 59, 63-64, Osoegawa teaches a library which would comprise the RPCI-11 library, which Genbank Accession No. AC009631 shows has 1225 contiguous nucleotides in the claimed region (see alignment above).

With regard to claims 67-68, the phrase "consisting essentially of" is treated as equivalent to "comprising" since no specific definition of the term is provided and therefore Osoegawa also anticipates these claims.

With regard to claims 71-72, 74-84, Osoegawa teaches oligonucleotides of 1225 contiguous nucleotides which comprise a contiguous span of more than 1000 nucleotides overlapping positions 52626-53599 (see alignment above).

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5. Claims 50-52, 56-59, 63, 64, 67 and 68 are rejected under 35 U.S.C. 102(a) and (b) as being anticipated by Osoegawa et al (Genomics (1998)52:1-8) as evidenced by Genbank Accession No. AC068274 and an email from Pieter de Jong (attached).

Osoegawa teaches synthesis of BAC chromosome libraries (abstract). In particular, Osoegawa teaches the synthesis of a particular BAC library termed RPCI-11 (also called RP11) which was grown in bacterial host cells using recombinant vectors which were placed onto filters and the nucleic acid was isolated (page 2 and page 3, column 1).

A specific isolated BAC, RP11-119B15 which is in a composition of this library and which is at a specific location on the arrays sold by the BACPAC consortium, comprises 17 contiguous nucleotides from nucleotides that overlap position 32703 of SEQ ID NO: 179. As shown by the alignment below, this BAC has close match with the reference sequence.

Score = 34.2 bits (17), Expect = 1.5
Identities = 17/17 (100%), Gaps = 0/17 (0%)
Strand=Plus/Plus

```
Query 1      TCATTGTTTTAGAAATA 17
          |||||
Sbjct 73293 TCATTGTTTTAGAAATA 73309
```

The above alignment, where the central T is position 32703 of SEQ ID NO: 179, meets claim 50, element (e), since there is a sequence comprising a contiguous span of nucleotides where N is 32703, where X is equal to 8 and where Y is equal to 8.

The email of Pieter de Jong indicates that filters from the RPCI-11 library were first publicly available, used and sold on August 1, 1997.

With regard to claim 51, Osoegawa teaches that the sequences were in Bac vectors (see page 1, column 2, subheading "BAC/PAC vector preparation").

With regard to claim 52, Osoegawa teaches that the vectors were in bacterial host cells (see page 2, column 1).

With regard to claim 56, Osoegawa teaches that the sequences were in vectors, and the vector sequence can function as a label for the detection of the target sequence (see page 1, column 2. To explain, a DNA sequence may itself be a label, and frequently is used as such, since specific DNA can be detected by hybridization).

With regard to claims 57-58, Osoegawa teaches that the oligonucleotide is attached, indirectly, to a solid support (see page 2, column 1 and email, where filters were sold).

With regard to claims 59, 63-64, Osoegawa teaches a library which would comprise the RPCI-11 library, which Genbank Accession No. AC068274 shows has 543 contiguous nucleotides in the claimed region (see alignment above).

With regard to claims 67-68, the phrase "consisting essentially of" is treated as equivalent to "comprising" since no specific definition of the term is provided and therefore Osoegawa also anticipates these claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Osoegawa et al (Genomics (1998)52:1-8) in view of Capecchi et al (Science (1989) 244:1288-1292).

Osoegawa teaches vectors that comprise sequences of interest as discussed above.

Capecchi teaches the use of homologous recombination to form host cells and mammals (see page 1280, figure 1, for example).

It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to screen each of the sequences of Osoegawa for functional activity using the homologous recombination method of Capecchi since Capecchi states "Targeted disruption of these genes may not only reveal the phenotypes associated with inactivation of the individual genes, but through epistasis and molecular analyses, may also help define the developmental network controlling early mouse morphogenesis (see page 1292, column 1)." Thus, an ordinary

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practitioner, interested in identifying what phenotype is associated with the sequence of the sequences of Osoegawa would have been motivated by Capecchi to use targeted disruption in order to define the phenotype of the genes with which the sequence of Osoegawa are associated.

Allowable Subject Matter

9. Claims 60 and 73 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: Claim 60 is drawn to the complete SEQ ID NO: 179. No such sequence was found in the sequence search and while the evidence from the chromosome 8 hits is that there is generally 99.8% or so alignment with hundreds of contiguous basepairs, there is no evidence that Weier is inherently identical over the entire length of SEQ ID NO: 179. Therefore, the claim to the entire sequence is novel and unobvious. With regard to claim 73, no sequences with at least 40 contiguous bases of SEQ ID NO: 179 at the specified positions were found in the sequence search. Therefore, these fragments are novel and unobvious.

Response to Arguments

11. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection necessitated by the amendment.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Fredman whose telephone number is (571)272-0742. The examiner can normally be reached on 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on (571)272-0782. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jeffrey Fredman
Primary Examiner
Art Unit 1637

7/19/05